# College of Public Health News

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Georgia Southern University

# Georgia Southern Examines Joint Modeling of Treatment Effect

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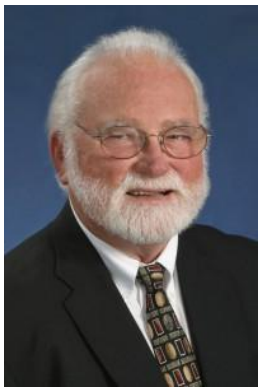

It is a common practice to perform separate analyses of efficacy and safety data from clinical trials to estimate the benefit and risk aspects of a particular treatment regimen. However, by doing so, one is likely to miss the complete picture of the treatment effect given that these data are generated from the same study subjects and therefore most likely will be correlated. Therefore, it is desirable to analyze these data jointly to obtain a more complete profile of the treatment regimen.

A substantial number of statistical methodologies have been proposed in the last decade to jointly model time-to-event data and longitudinal repeated measures. These methods provide better insight to understand the treatment effect when analyzing time-to-event data by incorporating the information contained in longitudinal repeated measures. In this article, we utilize the joint model method to analyze time-to-event data, such as overall patient survival, and repeated measures laboratory test data to better estimate the treatment effect of a regimen.

"Joint Modeling of Treatment Effect on Time-to-Event Endpoint and Safety Covariates in Control Clinical Trial Data Analysis," is published in Austin Biometrics and Biostatistics.

Dr. Kao-Tai Tsai, adjunct professor of biostatistics at the Jiann-Ping Hsu College of Public Health Georgia Southern University (JPHCOPH) is the lead author. Dr. Karl E. Peace, professor of biostatistics and Georgia Cancer Coalition Distinguished Cancer Scholar was the co-author.